

Plainville Unified School District 270

Energy efficient upgrades will save the district more than \$50,000 a year

In August of 2009, Plainville USD 270 entered into a \$2.5 million energy savings project with Trane. The project consisted of building upgrades designed to reduce the district's annual energy usage and address deferred maintenance issues.

Plainville utilized Qualified Zone Academy Bonds (QZAB) to finance part of the improvement projects. With this financing, they will receive 0% interest for 10 years, 2% earnings on accumulative bond repayment balance, and are able to work with local lenders to help the local economy. The remaining financing will come from the savings realized as a result of the building improvements. The total project will be paid for over a fifteen year period.

Construction was complete in August 2010 and overall savings in operations maintenance and utilities expenses are projected to be approximately \$52,000 annually. Before-and-after photos were taken during construction to document the phenomenal facility transformations, six of which are featured in this document.



High School Entrance: Replaced single pane aluminum entry doors with new aluminum thermal break doors and sidelights with tinted double pane insulating glass.



Upgrades at Plainville USD 270 Included:

- Window upgrades
- Roof replacement & upgrades on three buildings
- HVAC upgrades & replacement
- Boiler burner and condensing unit replacements
- Efficient lighting upgrades
- Occupancy sensors installed
- Building automation systems installed
- Low-flow plumbing fixtures
- Unit ventilators for classrooms



Middle School: Removed split systems and window air conditioning units. Installed packaged HVAC units on the roof and on south side of the building and duct into classrooms.



AFTER

BEFORE

08/26



BEFORE



AFTER

08/16/2010

High School: Replaced single pane steel windows with new aluminum thermal break windows with tinted double pane insulating glass.

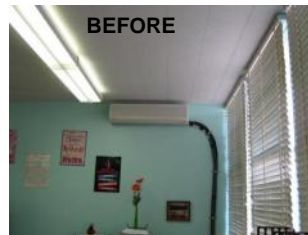


AFTER

Gym: Replaced existing light fixtures with high efficiency electronic ballasts. Replaced incandescent exit signs with energy saving LED signs. Installed occupancy sensors on light fixtures.



BEFORE



BEFORE

High School: Replaced existing split system cooling and 60-year-old unit ventilators with new higher efficiency HVAC units. Replaced existing surface mounted light fixtures with higher efficiency recessed fixtures in new suspended ceilings. Lights are controlled by motion sensors.



AFTER

08/27/2010



AFTER



BEFORE

High School: Replaced single pane steel windows with new aluminum thermal break windows with tinted double pane insulating glass.

About Plainville USD 358

Plainville is located in Rooks County, Kansas, about 30 miles north of Hays and 200 miles west of Topeka. The schools are located in the small community of Plainville with a population of less than 2,000. The school district has an enrollment of approximately 350 students and 85 employees including teachers, support staff, bus drivers, and administrators. Plainville's mission is to provide educational opportunities in a safe environment and to promote lifelong learning skills. Plainville is achieving this mission through energy savings projects that are enhancing the learning environment.